

WHAT IS CLAIMED IS:

- 5 1. An improved marine vessel comprising:
 a hull, the hull including a transom and having a
predetermined waterline intersecting the hull and transom;
 an engine disposed within the hull;
 an engine driveshaft driven by the engine;
10 a lower gear set;
 an interior upright shaft driven by the engine driveshaft
through the lower gear set;
 an upper gear set;
 an upper driveshaft passing through the transom and
15 driven by the interior upright shaft through the upper gear
set; and
 a stern drive attached to the transom, the stern drive
comprising:
 a vertical shaft driven by the upper driveshaft;
20 a propeller shaft driven by the vertical shaft; and
 a housing attached to the transom and enclosing the
vertical shaft;
 wherein the propeller shaft exits the housing of the
stern drive; and
25 wherein the upper driveshaft passes through the transom
and enters the stern drive above the predetermined waterline.

2. The vessel of Claim 1, wherein the engine driveshaft
and the interior upright shaft form an angle of approximately
30 ninety degrees; and
 wherein the upper driveshaft and the interior upright
shaft form an angle of approximately ninety degrees.

3. The vessel of Claim 1, wherein the lower gear set
35 includes at least one beveled gear; and

wherein the upper gear set includes at least one beveled gear.

5 4. The vessel of Claim 1, wherein the stern drive includes a mounting plate attached to the transom of the vessel above the predetermined waterline.

10 5. The vessel of Claim 1, further comprising an actuator for trimming the attitude of the stern drive disposed between the housing of the stern drive and the transom of the vessel.

15 6. The vessel of Claim 5, wherein the stern drive further comprises a cantilevered member attached to the housing; and

 wherein the actuator is disposed between the cantilevered member and the transom of the vessel.

20 7. The vessel of Claim 5, wherein the actuator repositions the housing of the stern drive between an operative position below the predetermined waterline and a maintenance position wherein substantially all of the housing
25 of the stern drive is lifted above the predetermined waterline.

30 8. The vessel of Claim 5, wherein the actuator repositions the housing of the stern drive between a substantially vertical position and a substantially horizontal position.

35 9. The vessel of Claim 8, wherein the propeller shaft of the stern drive is brought above the predetermined

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waterline when the stern drive is in a substantially horizontal position.

5 10. The vessel of Claim 8, wherein the stern drive is brought completely above the predetermined waterline when in a substantially horizontal position.

10 11. The vessel of Claim 1, wherein the vertical shaft is driven by the upper driveshaft through a first set of gears and a universal joint located above the predetermined waterline.

15 12. The vessel of Claim 11, wherein the stern drive further comprises a bellows enclosing the first set of gears and the universal joint.

20 13. The vessel of Claim 1, further comprising:
a cooling system connected to the engine;
a water pump connected to the cooling system; and
a water intake connected to the water pump;
wherein the water intake is spaced apart from the stern drive.

25 14. The vessel of Claim 1, further comprising an exhaust system running from the engine to a terminal point on the transom of the vessel above the predetermined waterline.

30 15. The vessel of Claim 14, wherein the exhaust system includes a muffler.

35 16. An improved marine vessel comprising:
a hull, the hull including a transom and having a predetermined waterline intersecting the hull and transom;

an engine disposed within the hull;

an upper driveshaft driven by the engine, said driveshaft
5 passing through the transom; and

a stern drive attached to the transom, the stern drive including a vertical shaft driven by the upper driveshaft, a propeller shaft driven by the vertical shaft, and a housing attached to the transom and enclosing the vertical shaft;

10 wherein the propeller shaft exits the housing of the stern drive; and

wherein the upper driveshaft passes through the transom and enters the stern drive above the predetermined waterline.

15 17. The vessel of Claim 16, wherein the stern drive includes a mounting plate attached to the transom of the vessel above the predetermined waterline.

20 18. The vessel of Claim 16, further comprising an actuator disposed between the housing of the stern drive and the transom of the vessel.

25 19. The vessel of Claim 18, wherein the stern drive further comprises a cantilevered member attached to the housing; and

wherein the actuator is disposed between the cantilevered member and the transom of the vessel.

30 20. The vessel of Claim 18, wherein the actuator repositions the housing of the stern drive between an operative position below the predetermined waterline and a maintenance position wherein substantially all of the housing of the stern drive is lifted above the predetermined waterline.

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21. The vessel of Claim 18, wherein the actuator repositions the housing of the stern drive between a substantially vertical position and a substantially horizontal position.

22. The vessel of Claim 21, wherein the propeller shaft of the stern drive is brought above the predetermined waterline when the stern drive is in a substantially horizontal position.

23. The vessel of Claim 21, wherein the stern drive is brought completely above the predetermined waterline when in a substantially horizontal position.

24. The vessel of Claim 16, wherein the vertical shaft is driven by the upper driveshaft through a first set of gears and a universal joint located above the predetermined waterline.

25. The vessel of Claim 24, wherein the stern drive further comprises a bellows enclosing the first set of gears and the universal joint.

26. The vessel of Claim 16, wherein the engine drives the upper driveshaft through an engine driveshaft extending from the engine, a flywheel connected to the engine driveshaft, and a drive wheel connected to the upper driveshaft and engaging said flywheel.

27. The vessel of Claim 16, wherein the engine drives the upper driveshaft through an engine driveshaft extending from the engine, a lower pulley connected to the engine driveshaft, an upper pulley connected to the upper driveshaft,

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and one or more belts connecting the lower pulley to the upper pulley.

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28. The vessel of Claim 16, wherein the engine drives the upper driveshaft through an engine driveshaft extending from the engine, wherein the engine is disposed within the hull so that the engine driveshaft lies coaxial with the upper driveshaft, and wherein the engine driveshaft rotatably engages the upper driveshaft.

29. The vessel of Claim 16, further comprising:
a cooling system connected to the engine;
15 a water pump connected to the cooling system;
a water intake connected to the water pump; and
wherein the water intake is located outside the stern drive.

20 30. The vessel of Claim 16, further comprising an exhaust system running from the engine to a terminal point above the predetermined waterline.

25 31. The vessel of Claim 30, wherein the exhaust system includes a muffler.

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